REMARKS

Claims 1-7 and 9-16 remain in this application. Claim 8 has been cancelled. Claims 1, 9 and 14 have been amended. Claims 1, 9 and 14 are independent claims.

A. Formalities

In an Office action dated October 20, 2004, the originally submitted drawings were objected to because boxes shown in the drawings were unlabeled. Corrected drawings were required. In response, submitted herewith are corrected drawings for Figs. 1 and 4. In addition to the "Replacement Sheets," sheets are included showing the corrections in red. In the Replacement Sheets, the dimensions of the boxes have been changed in order to provide space for insertion of the labels. The labeling is consistent with the specification as originally filed. No new matter has been added.

Line 23 on page 1 of the application has been amended to eliminate the word "is." The amendment merely provides a correction and does not change the substance of the sentence.

Applicants respectfully request that the amendments to the drawings and the specification be entered.

B. Patentability of Claim 1

1. Rejection under 35 U.S.C. 102(e) in View of Shaffer et al.

In the Office action dated October 20, 2004, claim 1 and its dependent claims 2, 3, 5, 6, 7 and 8 were rejected as allegedly being anticipated by Shaffer et al. (hereinafter Shaffer). In response to the Office action, Applicants have amended claim 1 to further distinguish it from the prior art. Specifically, the substance of the subject matter from claim 8 has been incorporated into claim 1, so that amended claim 1 includes the step of enabling utilization of the descriptions assigned by the operations within the progression of decisional nodes to implement searches via query matching.

The Office action cited Shaffer, paragraph 0031, lines 56-58 and paragraph 0034 as teaching the subject matter of implementing searches via query matching as described in original claim 8. The searches as taught by

Shaffer take place within the grouping step (paragraph 0031, lines 38-40). In the grouping step, images are grouped according to criteria derived from the analysis of the customer profile. Shaffer teaches that various grouping schemes (paragraph 0031, lines 51-54) may be utilized, such as grouping by location, common life cycle event or image content.

Shaffer also teaches that a variety of software algorithms (paragraph 0031, lines 54-64) exist which are applicable to grouping. One class of algorithms operates on meta-data associated with the image, where the grouping is similar to searching a media database. A second class of algorithms employed for this grouping process would include image processing algorithms which identify objects and feature sets within an image. However, there is no teaching in Shaffer that the grouping module assigns descriptions to the images. The assigning of descriptions to images takes place within the annotation step (paragraph 0032), which comes after the grouping step (Fig. 2) as taught by the prior art. In performing the automated processing step of Applicants' invention, assigning a description to the contents of a block of non-textual data (image) is paramount to this step of the invention, whereas in the grouping step taught by Shaffer assigning a description does not take place. The query matches of Applicants' invention are the result of searches implemented utilizing description assigned to blocks of non-textual data. Therefore, the query matches accomplished by the searches in Shaffer are not the query matches accomplished by the invention.

Succinctly stated, paragraph 0031 of Shaffer does not anticipate the method of amended claim 1, <u>since Shaffer teaches steps that are sequentially reversed and functionally distinct with respect to the steps of Applicants' claimed invention</u>. That is, while Shaffer teaches that searching techniques (paragraph 0031) may be used to enable the step of assigning descriptions (paragraph 0032), the method of claim 1 assigns descriptions to blocks of data and enables the assigned descriptions to be utilized to implement searches via query matching. <u>It is respectfully asserted that the approaches of Shaffer and claim 1 are both procedurally and substantively diverse, such that amended claim 1 is patentable over the teachings of Shaffer.</u>

Regarding the searches in paragraph 0034 of Shaffer, the searches and queries referred to are for the purpose of associating <u>external content</u> (paragraph 0034, lines 2-8) that is relevant to the image content. External content takes several forms, including weather reports, newspaper

headlines, stock photographs, advertisements, historical references, travel brochure copy, popular music clips, and video segments. Paragraph 0034 of Shaffer does not anticipate enabling utilization of the assigned descriptions to implement searches for particular blocks of data via query matching. The "blocks of data" of Shaffer are images. The images are interrogated to derive searchable topics, but the interrogation is not the "query matching" described in claim 1. Rather, Shaffer teaches a sequence of (a) interrogating the images to derive searchable topics, (b) assembling a series of potential such search topics, (c) formatting the series of potential search topics into queries, and (d) performing searches on a variety of databases to obtain the external content. The results of the content queries can then be refined by applying priority rules from the product description database and customer preferences. Shaffer teaches that the types of searches described in paragraph 0034 are common in information databases such as Yahoo. Again, Shaffer teaches the reverse of the method described in amended claim 1. That is, rather than implementing searches for particular blocks of data via query searching, Shaffer teaches that blocks of data (i.e., its images) are to be interrogated so that query matching can then occur. The searching described in Shaffer is not for the purpose of searching for a particular image, but is instead for the purpose of finding external content to be associated with the image or images. Therefore, paragraph 0034 does not anticipate the query matching searching described in claim 1, as amended.

Additionally, Applicants have amended claim 1 to further clarify the automated processing step as being one that includes utilizing meta-data in determining the description by operations within a progression of decisional nodes, the progression of decisional nodes being configured to invoke algorithms for selectively assigning descriptions to the blocks of data. The cited reference teaches (Shaffer: paragraph 0032, lines 5-9) that a very common form of annotation is text associated with each image and with each group of images to explain who, what, when, where and why and that such context information is generally derived from meta-data. Shaffer also teaches that various image understanding algorithms may be used to provide such information. The annotation (paragraph 0032, lines 33-35), once determined, may be associated with the individual images or groups of images. However, Shaffer does not teach that the description (annotation) is determined by the operations within a progression of decisional nodes. Nor is there any teaching in Shaffer that a progression of decisional nodes invokes algorithms for

selectively assigning descriptions to blocks of data. Shaffer merely teaches that image recognition algorithms may be used to determine the context information to annotate images or groups of images. Therefore, it is respectfully asserted that claim 1, as amended, is patentable over the prior art.

2. Rejections under 35 U.S.C. 103(a)

Spence et al. (hereinafter Spence) is cited as teaching (column 3, lines 58-65) a neural network that includes a "sequential progression of decision making" comprising a plurality of classification nodes (Fig. 2). The neural network undergoes supervised training. The trained neural network is then applied to an input image for detecting and/or classifying a target object. Furthermore, Spence teaches (column 4, lines 24-27) that multi-resolution techniques such as a coarse-to-fine search can be used to search for objects. However, there is no teaching in Spence that after the neural network has classified an object that the classification is utilized to implement a search to match a query. The searches and matches of Spence are performed to identify the proper classification, not to match a query based on that classification.

Applicants assert that it would not be obvious to modify Shaffer to include a neural network as taught by Spence. However, even if Shaffer were modified to include a neural network as part of the annotation step, it would not be obvious to utilize the context information derived from meta-data and identified by the neural network to implement a search to match a query. The image would merely be associated with the identified context information as an annotation.

The publication of Exif v.2.1 was cited for teaching tag attributes, such as exposure time, aperture, flash, and shutter speed. Hutcheson et al. (hereinafter Hutcheson) was cited for its teachings relating to a learning procedure. Applicants submit that even if Shaffer were modified to include selected teachings from the different references, a *prima facie* case of obviousness would not be present with respect to the method of claim 1, as amended.

In conclusion, since a material difference exists between amended claim 1 and the prior art and a *prima facie* case of obviousness does not exist, reconsideration for the patentability of amended claim 1 and its dependent claims is respectfully requested.

C. Patentability of Claims 9 and 14

The Office action rejected claims 9 and 14 under 35 U.S.C. 102(e) as allegedly not being patentable over Shaffer. In response, Applicants have amended the claims to further distinguish them over the prior art.

Claim 9, as amended, describes a system wherein a processor is configured to implement a classification technique. The <u>classification includes operations within a decision tree configured to invoke algorithms that utilize</u> both non-textual subject data and meta-data for identifying at least one classifier, the classifier being representative of an attribute of the subject data. The processor is further configured to implement searches for specific "said non-textual subject data" via query matching with the classifiers. As noted with regard to the patentability of claim 1, the "searching" described in paragraph 0031 of Shaffer occurs before the "classification," which leads away from the fundamentals of Applicants' claimed invention. The "searching" described in paragraph 0034 of Shaffer occurs after the "classification," but the queries are <u>derived from</u> the Shaffer images, <u>rather than being applied to</u> the images, so that paragraph 0034 does not establish a *prima facie* case of anticipation under Section 102. Moreover, by describing the classification techniques as including operations within a decision tree, Applicants' invention is clearly patentable over Shaffer. As previously remarked, Shaffer does not teach the specifics of implementing a classification technique for non-textual subject data and meta-data.

The Office action also cited Spence (Fig. 2) as teaching a neural network capable of classifying images within a hierarchical tree structure. Also, Spence is cited for teaching a progression of decision making comprising a plurality of classification nodes. However, the neural network taught by Spence does not enable searches as claimed by Applicants.

Even if Shaffer were modified to include the subject matter of Spence, Exif v.2.1 and Hutcheson, it would not teach Applicants' invention. Therefore, a *prima facie* case of obviousness does not exist. Reconsideration is respectfully requested.
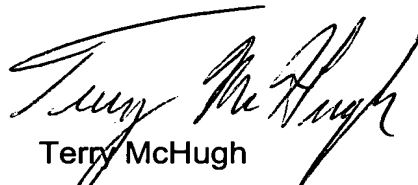
Regarding independent claim 14, which was rejected under 35 U.S.C. 102(e) as allegedly being unpatentable over Shaffer, claim 14 was amended in a manner similar to claims 1 and 9. Specifically, the evaluation system through which the file of non-textual subject data is processed is described as including <u>a progression of decisional nodes configured to invoke</u>

algorithms for selective identification of the plurality of classifiers. The method also includes enabling utilization of the plurality of classifiers identified by the evaluation system for decision making to implement searches for the file via query matching.

Remarks made in support of amended claims 1 and 9 apply to the determination of the patentability of amended claim 14. It is respectfully asserted that claim 14 and its dependent claims are allowable over the prior art.

Applicants respectfully request reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited. In the case that any issues regarding this application can be resolved expeditiously via a telephone conversation, Applicants invite the Examiner to call Terry McHugh at (650) 969-8458.
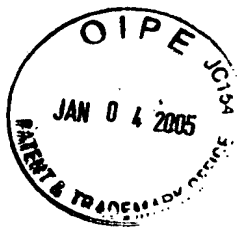
Respectfully submitted,

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Date: December 30, 2004
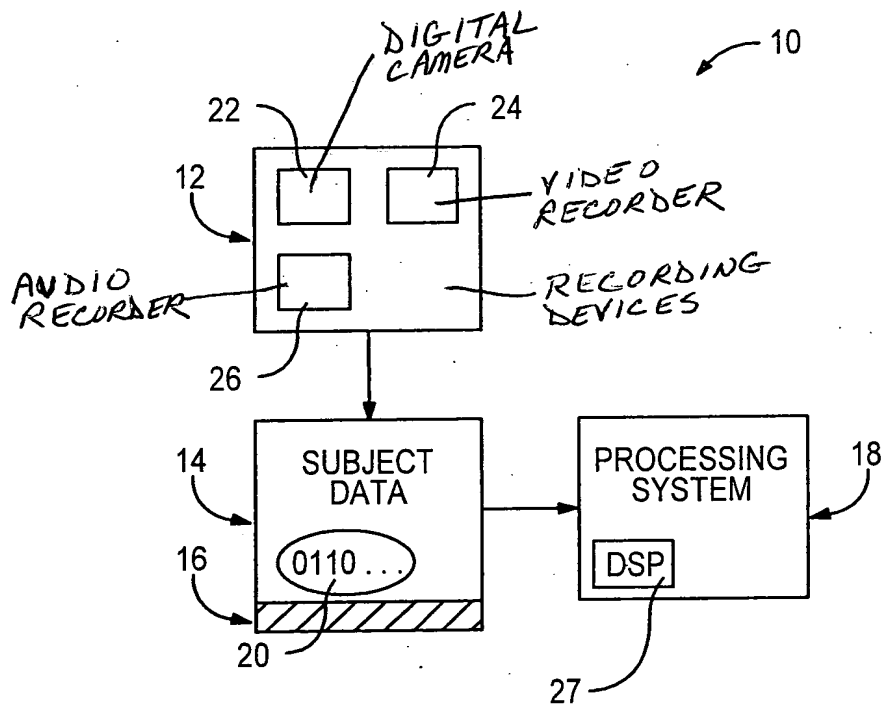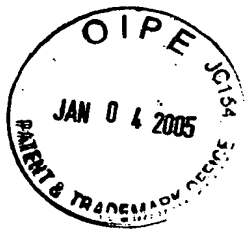
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FIG. 1

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FIG. 4